

CONTEXT SWITCHING PIPELINED MICROPROCESSOR

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ABSTRACT

A single shared processing path is used as contexts are switched during processing. Each unique context is

10 processed using a corresponding unique pipeline. If a pipeline that is executing under one context stalls, processing is switched in the shared processing path to another pipeline that is executing under second context.

New pipelines are enabled for execution by borrowing a clock
15 cycle from the currently executing pipeline. In some cases contexts are assigned various relative priority levels. In one case a context switching microprocessor is used in a communication engine portion of a system-on-a-chip communication system.

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